Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A device for temperature compensation, comprising:

a composite plate comprising plural fiber reinforced laminae, each of which has a designed fiber orientation, and having a specific temperature-dependent characteristic in a direction, for compensating an optical component positioned thereon and having a temperature-dependent deformation,

wherein said specific temperature-dependent characteristic is determined by said designed fiber orientation of said plural fiber laminae, and said composite plate has one end fixed in a compartment and the other end being a cantilever free end, and said compartment is sealed to isolate the influence of external temperature fluctuations.

2. (Original) A device as in claim 1 wherein said optical component includes fiber Bragg gratings.

3. (Original) A device as in claim 1 wherein said optical component includes a waveguide.

4. (Original) A device as in claim 3 wherein said optical component includes fiber Bragg gratings.

5. (Original) A device as in claim 1 wherein said specific temperature-dependent characteristic has a designable coefficient of thermal expansion in said direction.

6. (Original) A device as in claim 1 wherein each of said plural fiber laminae is made of reinforcing continuous fibers.

7. (Original) A device as in claim 6 wherein said composite plate is manufactured by consolidating a designed three dimensional array of said reinforcing continuous fibers and a matrix.

8. (Original) A device as in claim 7 wherein said matrix is a polymeric resin for binding said reinforcing continuous fibers together.

9. (Cancelled)

10. (Original) A device of claim 9 wherein a vacuum is created inside said compartment to alleviate heat conduction to said optical component under temperature compensation by convection and conduction.

11. (Original) A device of claim 9 wherein the said compartment is coated all around by a low thermal conducting material to alleviate heat conduction into said compartment.

12. (Original) A device as in claim 9 wherein an internal surface of said compartment is plated with a material having a low emissivity and a high

reflectivity to alleviate heat conduction to said optical component under temperature compensation by radiation.

13. (Original) A device as in claim 9 wherein an external surface of said compartment is plated with a material having a low emissivity and a high reflectivity to alleviate heat conduction to said optical component under temperature compensation by radiation.

14. (Original) A device as in claim 9 wherein a dead weight or adjustable mechanism is attached to said composite plate to allow pre-tuning of optical characteristics of said optical component without scarifying a temperature compensation capability of said composite plate.

15. (Currently amended) A method for temperature compensation, comprising steps of:

providing a composite plate comprising plural fiber laminae, each of which has a designed fiber orientation, and having a specific temperature-dependent characteristic in a direction; ~~and~~

bonding an optical component having a temperature-dependent deformation along said direction on said composite plate so as to compensate said deformation through said specific temperature-dependent characteristic; and

fixing said composite plate in a compartment at one end thereof,

wherein the other end of said composite plate is a cantilever free end, said specific temperature-dependent characteristic is determined by said designed fiber orientations of said fiber laminae, and said compartment is sealed to isolate the influence of external temperature fluctuations.

16. (Original) A method as in claim 15 wherein said optical component includes fiber Bragg gratings.

17. (Original) A method as in claim 15 wherein said optical component includes a waveguide.

18. (Original) A method as in claim 17 wherein said optical component includes fiber Bragg gratings.

19. (Original) A method as in claim 15 wherein said composite plate provides a contraction during temperature rise and an expansion during temperature drop.

20. (Original) A method as in claim 15 wherein said composite plate is fabricated by steps of:

providing said plural fiber laminae;

cutting said fiber laminae into specific size and shape;

stacking said fiber laminae with a designed sequence of said fiber orientations;

consolidating said stacked fiber laminae under appropriate temperature and pressure in a suitable mold into said composite plate; and

cutting said consolidated composite plate into a required size.

21. (Original) A method as in claim 20 wherein each of said fiber laminae is a prepreg of resin pre-impregnated fiber lamina.

22. (Original) A method as in claim 15 wherein said composite plate is consolidated by different molds tooling into a plate having one of a flat and a curved shape.

23. (Cancelled)

24. (Currently Amended) A ~~device~~ method of claim ~~23~~ 15 wherein a vacuum is created inside said compartment to alleviate heat conduction to said optical component under temperature compensation by convection and conduction.

25. (Currently Amended) A device method of claim ~~23~~ 15 wherein the said compartment is coated all around by a low thermal conducting material to alleviate heat conduction into said compartment.

26. (Currently Amended) A ~~device~~ method as in claim ~~23~~ 15 wherein an internal surface of said compartment is plated with a material having a low emissivity and a high reflectivity to alleviate heat throughput to said optical component under temperature compensation by radiation.

27. (Currently Amended) A ~~device~~ method as in claim ~~23~~ 15 wherein an external surface of said compartment is plated with a material having a low emissivity and a high reflectivity to alleviate heat throughput to said optical component under temperature compensation by radiation.

28. (Currently Amended) A ~~device~~ method as in claim ~~23~~ 15 wherein a dead weight or adjustable mechanism is attached to said composite plate to allow

pre-tuning of optical characteristics of said optical component without scarifying a temperature compensation capability of said composite plate.